



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Fang et al.

Serial Number: 10/685,318

Filed: October 14, 2003

For: **TREATED TEXTILES AND COMPOSITIONS  
FOR TREATING TEXTILES**

Group Art Unit: 1771

Examiner: Matzek, Matthew D.

Commissioner for Patents  
PO Box 1450  
Alexandria VA 22313-1450

**Certificate of Mailing Under 37 CFR § 1.8**

I hereby certify that this correspondence, and all correspondence referenced herein as being enclosed with this correspondence, is being deposited with the United States Postal Service in an envelope addressed to "Commissioner for Patents, PO Box 1450, Alexandria VA 22313-1450" with sufficient postage on the following

Date: October 29, 2007

Signature: Linda-Ann Manley

Name: Linda-Ann Manley

**DECLARATION OF INVENTOR SIDNEY LOCKE**

1. I, Sidney Locke make this statement from my own personal knowledge. I am a co-inventor of the invention set forth in the above referenced patent application.

2. My educational background is that I received a degree in Chemical Engineering in 1998 from the Georgia Institute of Technology in Atlanta, Georgia. Further, I received a Masters in Business Administration from Wake Forest University in 2005. I have attended at least about eight (8) industry seminars or trade shows in the field of automotive parts or fabrics.

3. I am employed as a Development Engineer in the Automotive Group for Milliken & Company ("Milliken) in Spartanburg, South Carolina. I have personal knowledge of the facts stated in this Declaration.

4. To my knowledge, the present invention has, since conception of the

invention, been owned by Milliken & Company. Milliken employees have an employment agreement obligation to assign inventions to Milliken & Company.

5. I am very familiar with fluorochemically treated fabrics, similar to those described in U.S. Patent No. 6,251,210 to Bullock et al ("Bullock"). In my experience, fluorochemical treatments of this type to textile fabrics generally cause the resulting treated fabric to be somewhat less conductive of charge than fabrics that do not receive such fluorochemical treatments. This may lead to undesirable charge build-up when using such treated fabrics.

6. I have reviewed the cited Bullock and Fraser (US Pat. No. 5,804,291; "Fraser") references. The Office Action combination of Bullock and Fraser prior art references would not, in my view, lead a person of skill in the art to the claimed invention. The result achieved by the invention is not predictable in light of these references.

7. The application of Fraser's aqueous solution could not be easily or readily applied as a secondary treatment to Bullock's primarily treated fabric. Bullock teaches two treatments – a primary and a secondary. The primary treatment applies 5% or more weight percent fluorochemical treatment agent. Then the fabric is dried. This primarily treated fabric would be highly water repellent. Water would essentially bead and slide from the surface of this fabric, without penetration. Any subsequent attempts to apply by dip coating an aqueous carbon black/binder treatment (as suggested by Fraser) would be ineffective.

8. Fraser teaches dipping the fabric to coat the entire substrate (all surfaces) with conductive material. Fraser does not teach selectively applying a conductive layer

to only one side of the material.

9. I am familiar with the prior art teachings of static discharge in fabric. The teachings in the prior art would tend to indicate that for the most efficient static discharge, one should apply conductivity enhancers to the user surface to make it likely for such enhancers be contacted by the electrical source. For some time, the industry has been using conductive face yarns for charge dissipation in certain applications. Such yarns are designed to provide the conductive material directly on the fibrous user interface, where the conductive face yarn contacts the user. In these prior art applications, the conductive material is available for direct electrical contact with the undesirable static charge that is introduced directly upon the fabric surface. Thus, the primary industry teaching in the art before the invention was to apply conductivity enhancers at or adjacent to the user interface. This prior art teaching is consistent with Fraser's teachings of full immersion dip coating, because dip coating an entire article would apply conductive material upon the user surface of the article.

10. Contrary to prior art teachings, we unexpectedly discovered that application of a conductive layer somewhat remote from the user surface actually works very well to reduce static. This feature is applied into a new set of products sold by Milliken marketed under the trademark "YES Essentials®" This is not to my knowledge recognized in the cited art, and this physical product configuration is at odds with the relevant teachings of the prior art. That is, it goes against industry trends in that respect. There is no suggestion in the cited art in Fraser or Bullock to substitute (for dip coating) a conductive coating layer that is located remote from the user interface. This feature of our invention is unexpected, and would not have been anticipated by a

person of skill in the art. The attached illustration shows differences between (1) the teachings of a hypothetical Bullock/Fraser combination as stated in the Office Action, and (2) our invention. In the invention, the coating may be applied by foam applicator.

This foam application is made to only one side (i.e. backside) to form a back-coated layer. The conductive material may be printed or applied to the backcoated layer. Screen printing is one manner of applying conductive lines or regions into the backcoated layer. This separate conductive layer is positioned remotely from the user surface, so that the conductive material is not adjacent the user surface. There is a gap between (1) the electrical source that touches the user surface of the textile, and (2) the back-coated conductive coating layer that dissipates charge.

11. Common sense indicates that a person familiar with electricity would be unlikely to try using a remote conductive coating layer to dissipate charge on a fabric. Electrical conductivity in general is known to be enhanced by a continuous and uninterrupted circuit. In the context of a fibrous fabric, this connection would be from the static generating region to the static dissipating region. It is contrary to logic that one could achieve good static dissipation by employing a conductive coating layer that is physically removed (and therefore "remote") from the user interface. However, that is achieved by the invention -- which to me -- is unexpected and was unpredictable based upon my understanding of the prior art as it existed in 2003 and before that time.

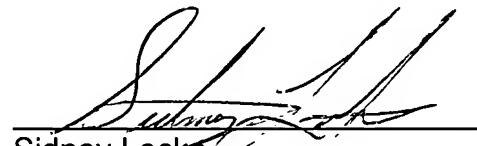
12. The invention of this application was launched as an automotive body cloth seat fabric in about the middle of the year 2006. The fabric is sold using the trademark YES Essentials®. See also [www.yesessentials.com](http://www.yesessentials.com) for a full product description. The product is shown in the written material attached to this Declaration. The fabric

incorporates an easy to clean repellency finish on the user surface of the fabric, antimicrobial odor control, and static shock resistance. Static shock is long term a problem (particularly in winter) for persons exiting a vehicle. There has been a long felt need in the industry for effective solutions to this problem. In fact, static shock can be dangerous in association with refueling a vehicle, and static shock has been suspected of causing fires in such instances. The YES Essentials® product reduces or eliminates the static shock problem, and it does so in a product configuration that is soft to the hand, with stain and water resistance.

13. YES Essentials® is the most commercially successful automotive fabric product launch in the history of Milliken & Company. Milliken & Company, established in 1865, provides more than 50% of the seating upholstery fabric for vehicles made in North America. This new fabric now is sold to several major automobile manufacturers in the United States, for incorporation into at least the following vehicle models: Chrysler Sebring Convertible, Chrysler Town and Country Van; Dodge Avenger; Dodge Caliber, Dodge Caravan, Dodge Dakota, Dodge Durango, Dodge Nitro, Dodge Ram, Jeep Compass, Jeep Patriot, Jeep Wrangler, Chrysler Pacifica, Chrysler PT Cruiser and Chrysler Aspen.

14. This product now accounts for several million yards of fabric sold per year that incorporate the features of this invention. To date, the amount of revenue that may be attributed to the product is at least twenty (20) million United States dollars since initial product launch. The commercial success of YES Essentials® is believed to be due primarily to the novel and inventive features of the product, which are described in the above referenced patent application.

15. All statements set forth herein are made of my own knowledge and are true, and all statements made on information and belief are believed to be true. I make these statements with the knowledge that willful false statements are punishable by fine or imprisonment, or both, and may jeopardize the validity of the application or any patent issuing thereon.



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10/29/07  
Date